Next Generation Roadmap Climate Act

Community Climate Summit

Tuesday, December 7

Presentation by State Senator Jamie Eldridge

Next Generation RoadMap Climate Act

Key Highlights

- **Sets a statewide Net-Zero Emissions by 2050**
  - It requires the state to hit near-term limits in 2025, 2030, and every five years thereafter.
  - Each limit shall be accompanied by publication of a comprehensive, clear and specific roadmap plan to realize said limit.
  - The secretary, in consultation with the department and the department of energy resources must set 5yr goals, but the below are set in the legislation
    - Interim 2030 statewide limit - at least 50% below the 1990 level, and the
    - Interim 2040 statewide limit - at least 75% below the 1990 level.
    - The 2050 emissions limit must be at least 85% below 1990 emissions.
- **Municipal opt-in specialized stretch energy code**
  - DOER is responsible for developing a municipal opt-in specialized stretch energy code. This code is to include, but not limited to,
    - net-zero building performance standards and a definition of net-zero building, designed to achieve compliance with the commonwealth's statewide greenhouse gas emission limits and sublimits
  - This will support communities that choose to move away from fossil fuels as the source of heating for new buildings.

- **Increases the Renewable Portfolio Standard (RPS)**, resulting in 40 per cent renewable energy by 2030.
- **Prioritizes equitable access to the state's solar programs**
  - The Department of Energy Resources (DOER) is currently working on a low-income solar program, and will provide information on how to access once completed.
- **Clean Energy Technologies**
  - Sets benchmarks for the adoption of clean energy technologies including electric vehicles, charging stations, solar technology, energy storage, heat pumps and anaerobic digesters.
    - Establishes a pilot program to deploy geothermal heat pump micro-districts, and innovative clean energy technology.
    - Establishes appliance efficiency standards for 17 residential and commercial products

- **Provides solar incentives for businesses**
  - Exempted Class II and Class III facilities from the net metering caps, allowing businesses to install solar systems on their premises to help offset their electricity use and save money
- **Greenhouse gas emissions standard for municipal light plants (MLP)**
  - Requires MLPs to purchase 50% of their power from non-carbon sources by 2030 and get to net zero emissions by 2050.
- **Nature Based Solutions (NBS) & Natural Climate Solutions (NCS)**
  - Factors Biogenic Emissions & Carbon Sequestration capacity of Massachusetts' natural and working lands directly into the emissions reduction plan.
  - The Executive Office of Energy and Environmental Affairs (EOEEA) has programs in place to support NBS & NCS, but are currently working on the framework to increase focus on NBS and NCS for grant applications and programs

American Rescue Plan Act (ARPA)

Overview

- The state legislature passed $3.99 billion directed from federal ARPA funding to assist the Commonwealth's ongoing recovery
  - $370.1 million allocated for Energy & Environment
- The bill was sent to the governor's desk. We are waiting to see if he will sign or send it back to the legislature.

Energy & Environmental Funding Breakdown

- $100M for environmental infrastructure support, including the Municipal Vulnerability Preparedness (MVP) program.
- $100M for water and sewer infrastructure investments through the Clean Water Trust
- $90M for offshore wind and marine port development.
- $25M for Greening the Gateway Cities program to support tree planting
- $15M for state parks and open spaces
- $6.5M to retrofit affordable housing with clean energy options.
- $5M to increase geothermal energy opportunities.
- $7.5M for community colleges to help train underserved populations for green jobs

Resources For Communities

EOEEA

- Executive Office of Energy and Environmental Affairs (EOEEA) has a number of programs and grants to help communities combat climate change, and therefore the goals reach the goals of the Next Generation RoadMap Climate Act

Programs and Grants provided by EOEEA

- **Green Communities:** Provides cities and towns grant funds to do retrofits, EV fleet replacement, energy efficient appliance usage etc.
- **Municipal Vulnerability Preparedness Program (MVP):** Provides cities and towns grant funds to carry out resiliency projects including, but not limited to tree planting, open space land protection, and increasing electrification and renewable energy usage while protecting land.
- **Massachusetts Electric Vehicle Incentive Program (MassEVIP):** Helps eligible public entities acquire electric vehicles and install charging stations for their fleets, and helps employers acquire electric vehicle (EV) charging stations.
- **The Mass Clean Diesel Program:** Has provided grants to convert diesel refrigeration units (that can run 24 hours a day) with electric replacements, reducing greenhouse gas emissions.

- **CERP Gap Funding Grants** support the installation of energy efficiency and renewable energy projects at public drinking water and wastewater facilities.
- **Solar Massachusetts Renewable Target (SMART) Program** - this incentive program established to support the development of solar in Massachusetts. There are declining block programs and in the early stages was very useful. Take into consideration if the project is large scale.
- **Municipal Light Plant Solar Rebate Program** - the solar rebate program available to customers in Massachusetts Municipal Light Plant (MLP) service territories
- **State Revolving Loan Fund (SRF) for Drinking Water and Wastewater Infrastructure:** offers affordable loan options to cities and towns to help protect their clean water and drinking water. They provide financial support for drinking water and wastewater treatment facilities and stormwater pollution controls.

- **Water Management Act Grants:** Provide funds for planning assistance, demand management, and withdrawal impact mitigation projects in local communities.
- **Wetlands Circuit Rider Assistance:** Provide technical and regulatory assistance. Circuit Rider trainings cover a wide range of subjects, many of which are related to climate effects and wetlands management for natural resiliency
- **The Parkland Acquisitions and Renovations for Communities (PARC) Grant Program** – Assists cities and towns in acquiring and developing land for park and outdoor recreation purposes
- **Resilient Massachusetts Action Team (RMAT) -** Team of inter-agencies that work on resiliency efforts. RMAT provides tools to help communities identify the climate impacts of their state funded projects and steps they can take to mitigate those impacts while spending funds most wisely

MassCEC

The Massachusetts Clean Energy Center (MassCEC) has many programs and initiatives for communities that are looking to incorporate renewable and efficient energy into their energy portfolios. These include

- Clean Energy Lives Here
- EmPower Massachusetts
- The Passive House Design Challenge
- Accelerating Clean Transportation Now (ACTNOW)
- Accelerating Clean Transportation for All (ACT4All)

Programs and Incentives from MassCEC

- **Clean Energy Lives Here** provides a toolbox for individuals and municipalities that want to transition their homes to clean energy, a framework for making those upgrades, in depth resources for each specific home upgrade
  - For more information visit https://goclean.masscec.com/
- **EmPower Massachusetts** is an initiative to explore, develop and implement program models or projects focused exclusively on increasing access to the benefits of clean energy or meaningfully reducing energy burden to previously underserved populations in Massachusetts.
  - Innovation and Capacity Building Grants - funding up to $25,000 for new and innovative program ideas
  - Implementation Grants - funding up to $150,000 for programs/projects that are ready to implement, but need funding support

- **Passive House Design Challenge:** This is an incentive program for new construction multi-family projects of four stories and above to consider and certify building to Passive House standards. Buildings are eligible for:
  - 100% of Passive House feasibility study up to $5,000
  - 75% up to $20,000 for Passive House Energy Modelling
  - $3,000 per unit if the building gets Passive House certification
- **Accelerating Clean Transportation Now (ACTNOW)** The Goal is to pilot innovative, broadly replicable clean transportation adoption and deployment business and service delivery models
- **Accelerating Clean Transportation for All (ACT4All)** is a program that aims to pilot equity-focused transportation programs that expand mobility options or reduce emissions in heavily impacted communities.

Successful Projects with MassCEC

- **2017** - First multi-family Passive House project built in MA (28 units)
- **2018-** MassCEC provides grants to 8 multi-family affordable housing projects
- **2019** - Mass Save launches incentive program for multi-family Passive House
- **2020** - MA housing agency adds points for Passive House in tax credit program

Passive House Program Results

8 Projects 540 units

86 developers and architects

5,400+ units and **86+** owners considering Passive House certification

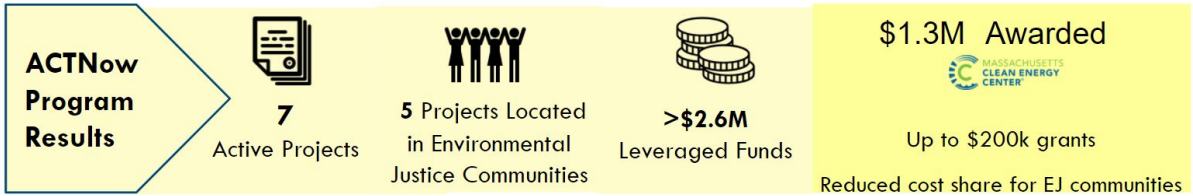
$1.8M Awarded

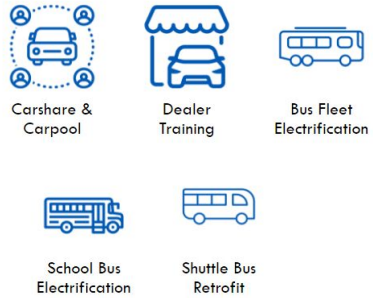
Informed 2 state Passive House incentive programs

Cambridge Finch, 98 units & Gloucester Harbor Village, 53 units

Successful Projects with MassCEC

- **2020** – MassCEC awards ACTNow Program, resulting in 7 innovative clean transportation projects demonstrating successful business and financing models
- **2021** – MassCEC awards commercial fleet electrification advisory services to leverage state rebates for medium- and heavy-duty vehicles. Informed by 3 ACTNow electric school bus projects.
- **2021** – MassCEC launches ACT4All Program, to demonstrate equitable clean transportation programs that can be replicated and scaled across the Commonwealth. Informed by ACTNow program design and community-based organization feedback.





Community Action

Community Highlights

- Acton
- Wayland
- Westborough
- Lincoln/Sudbury

Acton

- **Acton Energize** provides a platform for the town to identify a list of actions that residents and businesses can take to reduce their carbon footprint
- **Acton Clean Energy Challenge:** a town-wide initiative providing no-cost consultations with impartial technology experts and a marketplace of third-party vetted contractors, enabling residents to adopt clean heating and cooling technologies
- **Climate Action Plan (CAP):** Buildings and Clean Energy Goals for the Town including the below action items
  - Outreach to renters to embrace solar/energy efficiency
  - 100% clean energy as the default option
  - Transitioning to all electric school buses and town vehicles
- **MassCEC grant to develop a transportation plan**, including expanding access to the free shuttle system and the development of a bikeshare program and to expand local mobility options.
- **The Twin Elementary School** uses geothermal and solar technologies to generate renewable power

Wayland

- **Partnerships**
  - Partnered with Metropolitan Area Planning Council (MAPC) for the LED streetlight conversions
  - Participated in the SolarizeMass Program
  - MassEnergize Community
    - **MassEnergize** works with community organizers and local leaders to scale household and community-level climate actions.
- **Energy Improvement highlights**
  - 11% energy reduction by entering into a $2.4M ESCO for municipal building improvements
  - ***Solar Installations:*** 1.5MW at four sites, and 74 households through the SolarizeMass program
  - ***Savings:*** 25% municipal energy load offset by solar, $100K reduction in municipal electric cost, and $60K anticipated savings from ongoing LED streetlight conversion

Westborough - Annie E. Fales Elementary School

- **First net-positive-energy public school built in Massachusetts.**
  - Designed by HMFH Architects
  - Expected to generate a 10% annual surplus energy
- **On-site renewable energy sources**
  - Forty 600 foot deep geothermal wells for heating and cooling
  - 25,000 square foot solar photovoltaic array on the roof
- **Additional features**
  - Triple-glazed windows,
  - Insulation 40% above code requirements,
  - High efficiency mechanical systems,
  - LED lighting with daylight and occupancy sensors, and
  - A building management system that integrates, monitors, and controls all systems for maximum efficiency

Other Communities

- **Lincoln/Sudbury Lincoln-Sudbury Regional High School**
  - 1.2 MW solar canopy covering the majority of the parking lot finished in 2015
  - Constructed and is maintained by ForeFront Power (previously SunEdison), as part of a 20-year Power Purchase Agreement (PPA)
- **Littleton - Solar Roof on new Library & EV Charging stations**
  - Built to accommodate a 35 KW PV solar array
  - Installed free public EV charging stations at the Littleton Electric Light and Water District (LELWD)

Recommendations for your town

- Hire a Sustainability Director
- Develop & pass a Climate Action Plan
- Draft a Home Rule Petition (& Statewide bill)
- Reach out to renters/landlords and have them implement solar/energy efficiency in homes

Discussion / Q&A

Additional Questions?

Please Contact:

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